#### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2015

#### **Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	09/29/2015 09/29/2015	Jai Lor

LM Start		Rating **	Α	Issue No.		3	
LM End		Issue Type +	Ма	Location *		N/A	
Category	Earthen Levee			GPS La	atituc	de/Longitude	
Category						End	
Item		s & Maintena	nce		0		0
пеш	Manuals				0		0
DWR ID	DWR ID DWR_NA0008_01_s _ 2013_3						
		Action/	Comme	nts			
Inspector (	Comments	: District has	levee O	&M manuals	3.		

No Photos

Rating \*\* Issue No. LM Start 8 LM End Issue Type + Ma Location \* N/A Earthen Levee GPS Latitude/Longitude Category End **Emergency Supplies &** Item Equipment DWR ID DWR\_NA0008\_01\_s \_ 2013\_8 Action/Comments Inspector Comments: District maintains a stockpile of flood fight

No Photos

Rating \*\* Issue No. LM Start Issue Type + Ma Location \* N/A LM End Earthen Levee GPS Latitude/Longitude Category Flood Preparedness & Training Item DWR ID DWR\_NA0008\_01\_s \_ 2013\_9 Action/Comments

No Photos

Inspector Comments: District has written response plan and regular flood fight training.

CR : Crown

response material.

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma: Maintenance Deficiancy
Ob: Design & System Obsolescence
En: Enforcement

#### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2015

#### **Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	09/29/2015 09/29/2015	Jai Lor

LM Start	0.00	Rating **	Α	Issue No.		14	
LM End	6.35	Issue Type +	Ма	Location *		LS	
Category Earthen Levee				GPS Latitude/Longitude			
Calegory		Start		End			
Item	Vegetatio	n		38.71906	63°	38.792438	0
item					39°	-121.726674	0
DWR ID	DWR_NA0008_01_f _ 2015_14						

#### Action/Comments

Control annual grass and weeds on the levee slopes and easements. Inspector Comments: The LMA has maintained the vegetation on the slope.

# Photo 1 of 1: FA\_2015\_NA0008\_256\_14\_20151005\_00013.jpg



View of the vegetation on the landward side of the levee looking upstream. Fall 2015.

LM Start	0.00	Rating **	Α	Issue No.	15		
LM End	6.35	Issue Type +	Ма	Location *	WS		
Category	Earthen L	evee		GPS La	titud	e/Longitude	
Calegory			Start		End		
Item	Vegetatio	Vegetation			63 °	38.792438	0
пеш				-121.6641	40 °	-121.726674	0
DWR ID	DWR_NA0008_01_f _ 2015_15						
		Action/	Comme	nts			

Control annual grass and weeds on the levee slopes and easements. Inspector Comments: The LMA has maintained the vegetation on the slope.

No Photos

LM Start	2.58 Rating ** C		С	Issue No.		19	
LM End	2.58	Issue Type +	Ma	Location *	WS		
Category	Earthen L	evee		GPS La	titud	e/Longitude	
		Start		End			
Item	Cracking			38.7472	18 °	38.747218	٥
				-121.6944	50 °	-121.694450	0
DWR ID	DWR_NA0	008_01_f _ 201	3_19				

#### Action/Comments

Monitor and have inspected by geotechnical engineer. Inspector Comments: Cracks along crown and down waterside slope. No Photos

#### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2015

#### **Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	09/29/2015 09/29/2015	Jai Lor

LM Start	3.36	Rating **	М	Issue No.	2			
LM End	3.44	Issue Type +	Ma	Location *	WS			
Category	Suppleme	ental		GPS La	tituc	le/Longitude		
Calegory				Start		End		
Item	2015 USACE Erosion Survey, DRAFT			38.75843	32 °	38.759332 °		
пеш				-121.69515	8°	-121.696063 °		
DWR ID								
	Action/Comments							

Inspector Comments: 2011 - Toe scour and bank slumping. 2015: Site is part of the extended inventory, last inspected 2011. [2015 Site ID: KLR\_3-5\_R]

No Photos

LM Start	3.50	Rating **	U	Issue No.	20		
LM End	3.50	Issue Type +	Ма	Location *	WS		
Category	Earthen L	GPS Latitude/Longitude					
Calegory				Start		End	
Item	Erosion / Bank Caving			38.7599 <sup>-</sup>	10°	38.759910 °	
item				-121.69692	20°	-121.696920 °	
DWR ID	DWR_NA0008_01_f _ 2015_20						
Action/Comments							

Note and monitor erosion site.

LM Start	3.50	Rating **	U	Issue No.	20 (cont)
LM End	3 50	Issue Type +	Ma	Location *	WS

# Photo 1 of 2: FA\_2015\_NA0008\_256\_20\_20150914\_00005.jpg



Deep erosion at the bottom of the waterside slope 3-4 foot cut. Fall 2013

Photo 2 of 2: FA\_2015\_NA0008\_256\_20\_20151005\_00020.jpg



View of the erosion on the waterward side of the levee looking upstream. Fall 2015.

Location Issue Type Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence LS : Land Side N/A : Not Applicable N : Not Inspected/Rated A : Acceptable M : Minimally Acceptable CR : Crown U : Unacceptable A/W: Acceptable but Monitor & Maintain En : Enforcement

#### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2015

#### **Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	09/29/2015 09/29/2015	Jai Lor

LM Start	3.88	Rating **	М	Issue No.		1				
LM End	3.95	Issue Type +	Ma	Location *	WS					
Catagory	Suppleme	ental		GPS La	titud	e/Longitude				
Category				Start		End				
Item		CE Erosion S	Survey,	38.7640	37 °	38.764905	0			
пеш	DRAFT			-121.7014	34 °	-121.702074	0			
DWR ID										
	A a 17 a a 10 a a a a a a a									

Action/Comments

Inspector Comments: 2011 - Toe erosion and erosion pockets from tree popouts. More tree popouts are expected due to the eroding toe. 2015: Site is part of the extended inventory, last inspected 2011. [2015 Site ID: KLR\_3-9\_R]

No Photos

LM Start	4.28	Rating **	М	Issue No.	21	
LM End	4.28	Issue Type +	Ма	Location *	WS	
Category Earthen Levee			GPS Latitude/Longitude			
Calegory	alegory					End
Item	Animal Control			38.7696	08 °	38.769608 °
Item				-121.7030	76°	-121.703076 °
DWR ID DWR_NA0008_01_f _ 2015_21						

Action/Comments

No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

## Photo 1 of 1: FA\_2015\_NA0008\_256\_21\_20151005\_00021.jpg



View of the rodent holes on the waterward side of the levee looking upstream. Fall 2015.

LM Start	5.26	Rating **	М	Issue No.		23	
LM End	5.26	Issue Type +	Ma	Location *		CR	
Category	Earthen L	GPS Latitude/Longitude					
Category	alegory				Start		
Item		rface / Depres	ssions /	38.7813	36 °	38.781336	0
пеш	Rutting			-121.7123	68°	-121.712368	0
DWR ID	DWR_NA0						
		Action/	Comme	nts			

No Photos

* Location	
LS : Land Side	N/A: Not Applicable
WS : Water Side	
CR : Crown	
	LS : Land Side WS : Water Side

: Acceptable : Minimally Acceptable U : Unacceptable

N: Not Inspected/Rated A/W: Acceptable but Monitor & Maintain Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

Repair depressions or ruts in the crown or slope.

#### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2015

#### **Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	09/29/2015 09/29/2015	Jai Lor

LM Start	6.23	Rating **	М	Issue No.	24		
LM End	6.23	Issue Type +	Ma	Location *	WS		
Category	Earthen L	evee		GPS Latitude/Longitude			
Calegory			Start		End		
Item	Animal Control			38.79128	36°	38.791286 °	
пеш				-121.72503	34 °	-121.725034 °	
DWR ID	DWR_NA0	008_01_f _ 201	5_24				
		Action/	Comme	nts			
Exterminate rodents and backfill and compact or grout burrows.							

# Photo 1 of 1: FA\_2015\_NA0008\_256\_24\_20151005\_00024.jpg

View of the rodent holes on the waterward side of the levee looking downstream. Fall 2015.

LM Start	6.29	Rating **	U	Issue No.	25		
LM End	6.29	Issue Type +	Ma	Location *	WS		
Earthen Levee			GPS Latitude/Longitude				
Category	У			Start		End	
Item	Animal Control			38.791949°		38.791949 °	
пеш					21 °	-121.725921 °	
DWR ID	DWR_NA0	008_01_f _ 201	5_25				
		Action/	Comme	nts			
Exterminate rodents and backfill and compact or grout burrows.							



View of the animal hole on the waterward side of the levee looking upstream. Fall 2015.

#### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2015

#### **Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	09/29/2015 09/29/2015	Jai Lor

LM Start	0.00	Rating **	Α	Issue No.	14		
LM End	5.94	Issue Type +	Ма	Location *	WS		
Catagonia Earthen Levee			GPS Latitude/Longitude				
Calegory	Category			Start		End	
Item	Vegetatio	n		38.7242	73 °	38.792721	0
item				-121.6652	89 °	-121.724112	0
DWR ID DWR_NA0008_02_f _ 2015_14							
Action/Comments							

Control annual grass and weeds on the levee slopes and easements. Inspector Comments: The slope has been mowed and in compliance.

Rating \*\* Issue No. LM Start 2.72 M 2 LM End 2.93 Issue Type + Ma Location \* WS Supplemental GPS Latitude/Longitude Category Start End 2015 USACE Erosion Survey, 38.754899° 38.757925 ° Item DRAFT -121.692653 ° -121.693048 ° DWR ID

Action/Comments

Inspector Comments: 2006 - The whole levee toe area is slowly slumping into the channel (creep) due to dewatering and poor slope soils. Occasional piping in the levee slope evident as well. Pistolbutted trees at the levee toe indicate slow retreat. 2011 - Multiple scallops throughout the site and slumping of the toe. 2015: Site is part of the extended inventory, last inspected 2011. [2015 Site ID: KLR\_3-0\_L]

Rating \*\* Issue No. 2.98 Μ 5 I M Start Location \* WS LM End 3.11 Issue Type + Supplemental GPS Latitude/Longitude Category End Start 2015 USACE Erosion Survey, 38.758587 ° 38.760053 ° Item DRAFT -121.693359° -121.694686 ° DWR ID Action/Comments

Inspector Comments: 2006 - The whole levee toe area is slowly slumping into the channel (creep) due to dewatering and poor slope soils. Occasional piping in the levee slope evident as well. Pistolbutted trees at the levee toe indicate slow retreat. 2011 - Slumping of the levee toe. 2015: Site is part of the extended inventory, last inspected 2011. [2015 Site ID: KLR\_3-1\_L]

No Photos

No Photos

No Photos

Location LS : Land Side N/A: Not Applicable

CR : Crown

A : Acceptable Minimally Acceptable U : Unacceptable

N: Not Inspected/Rated

Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence

#### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2015

#### **Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	09/29/2015 09/29/2015	Jai Lor

		D (' **						
LM Start	3.02	Rating **	С	Issue No.	230			
LM End	3.02	Issue Type +	Ma	Location *	WS			
Category Earthen Levee				GPS La	itud	le/Longitude		
Calegory	Salegory			Start		End		
Item	Erosion /	Erosion / Bank Caving			2 °	38.759112 °		
пеш				-121.69363	8 °	-121.693638 °		
DWR ID	DWR_NA0	008_02_f _ 201	3_230					
	Action/Comments							
Note and r	Note and monitor erosion site.							

No Photos

Rating \*\* С Issue No. LM Start 3.06 229 LM End 3.06 Issue Type + Ma Location \* WS Earthen Levee GPS Latitude/Longitude Category Start End Erosion / Bank Caving 38.759542 ° 38.759542 ° Item -121.694007 ° -121.694007 ° DWR ID DWR\_NA0008\_02\_f \_ 2013\_229 Action/Comments

No Photos

Note and monitor erosion site. Inspector Comments: Erosion is undermining large oak tree and is growing.

LM Start	3.60	Rating **	М	Issue No.		3		
LM End	3.73	Issue Type +	Ma	Location *	WS			
Category				GPS Latitude/Longitude				
Category		Start		End				
Item		2015 USACE Erosion Survey,			22 °	38.767336	0	
пеш	DRAFT			-121.7006	08 °	-121.701023	0	
DWR ID								
	Action/Comments							

No Photos

Inspector Comments: 2011 - The toe has eroded away and there are a few scallops from bank slumping. 2015: Site is part of the extended inventory, last inspected 2011. [2015 Site ID: KLR\_3-7\_L]

CR : Crown

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma: Maintenance Deficiancy
Ob: Design & System Obsolescence
En: Enforcement

#### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2015

#### **Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	09/29/2015 09/29/2015	Jai Lor

LM Start	4.17	Rating **	М	Issue No.		20
LM End	4.90	Issue Type +	Ma	Location *		LS
Category	evee		GPS Latitude/Longitude			
Calegory				Start		End
Itom	Vegetatio	n		38.7735	54 °	38.781930 °
item	-121.702435 ° -121.710416					
DWR ID DWR_NA0008_02_f _ 2015_20						
		Action/	Commo	ntc		

#### Control annual grass and weeds on the levee slopes and easements.

# Photo 1 of 1: FA\_2015\_NA0008\_257\_20\_20151005\_00023.jpg



View of the vegetation on the landward side of the levee looking downstream. Fall 2015.

LM Start	4.30	I.30 Rating ** M Issue No. 4					
LM End	4.55	Issue Type +	Ma	Location *	WS		
Category	ental		GPS Latitude/Longitude				
Calegory				Start		End	
Item		ACE Erosion S	Survey,	38.7752	71 °	38.778115	٥
item	DRAFT			-121.7036	85 °	-121.706195	٥
DWR ID							
	Action/Comments						

Inspector Comments: 2011 - This site is the downstream section of the old KLR 5.3L site. Levee toe is slowly retreating. Cracking on top of the levee may indicate potential mass movement. 2015: Site is part of the extended inventory, last inspected 2011. [2015 Site ID: KLR\_4-7\_L] No Photos

LM Start	4.59	Rating **	U	Issue No.		15	
LM End	4.59	Issue Type +	Ma	Location *		WS	
Category	Earthen Levee			GPS Latitude/Longitude			
Category			Start		End		
Item	Vegetatio	n		38.7787	′3 °	38.778773	0
пеш				-121.70648	32 °	-121.706482	0
DWR ID	DWR_NA0008_02_s _ 2014_15						

Action/Comments

Trees / Woody Vegetation

Inspector Comments: Identified trees shall be removed and associated root balls and roots shall be appropriately removed since it threatens the integrity of the levee.



A cottonwood tree may have been struck by lighting. The tree is split into three parts. Spring 2014

Location Issue Type Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence LS : Land Side N/A: Not Applicable N: Not Inspected/Rated A: Acceptable Minimally Acceptable CR : Crown U : Unacceptable A/W: Acceptable but Monitor & Maintain En: Enforcement

#### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2015

#### **Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	09/29/2015 09/29/2015	Jai Lor

LM Start	4.59	Rating **	U	Issue No.		15 (cont)
LM End	4.59	Issue Type +	Ma	Location * WS		WS
Category	Earthen Levee			GPS Latitude/Longitude		
Calegory	Category					End
Item	Vegetatio	n		38.77877	3 °	38.778773 °
item				-121.70648	2 °	-121.706482 °
DWR ID DWR_NA0008_02_s _ 2014_15						
			_			

#### Action/Comments

Trees / Woody Vegetation

Inspector Comments: Identified trees shall be removed and associated root balls and roots shall be appropriately removed since it threatens the integrity of the levee.

## Photo 2 of 2: FA\_2015\_NA0008\_257\_15\_20151005\_00026.jpg



The cottonwood tree has broken and is on the waterward side of the levee. Fall 2015.

LM Start	4.90 Rating ** A Issue No. 13				13	
LM End	5.94	Issue Type +	Ma	Location *		LS
Category	evee		GPS Latitude/Longitude			
Calegory			Start		End	
Item	Vegetation				30 °	38.792721 °
пеш				-121.7104	16 °	-121.724113 °
DWR ID DWR_NA0008_02_f _ 2015_13						
		Action/	Comme	nts		

Control annual grass and weeds on the levee slopes and easements. Inspector Comments: The slope has been mowed and in compliance.

#### Photo 1 of 1: FA 2015 NA0008 257 13 20151005 00015.jpg



View of the vegetation on the landward side of the levee looking downstream. Fall 2015.

LM Start	5.36	Rating **	М	Issue No.		6	
LM End	5.93	Issue Type +	Ma	Location *	WS		
Category	Suppleme	ental	GPS Latitude/Longitude				
Calegory	Category				Start End		
Item		ACE Erosion S	Survey,	38.7865	66°	38.792395	0
пеш	DRAFT			-121.7167	24 °	-121.724091	0
DWR ID							
			-				

Action/Comments

Inspector Comments: 2011 - This site is the upstream section of the old KLR 5.3L site. Levee toe is slowly retreating. Cracking on top of the levee may indicate potential mass movement. 2015: Site is part of the extended inventory, last inspected 2011. [2015 Site ID: KLR\_5-8\_L]

No Photos

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiancy Ob : Design & System Obsolescence En : Enforcement

#### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2015

#### **Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	09/29/2015 09/29/2015	Jai Lor

LM Start	<b>5.54</b> Rating ** M			Issue No.		17	
LM End	5.54	Issue Type +	Ma	Location *		LS	
Category	evee		GPS Latitude/Longitude				
Calegory			Start		End		
Itom	Animal Co	ontrol		38.7885	92 °	38.788592 °	
item	-121.718902 ° -121.7185					-121.718902 °	
DWR ID DWR_NA0008_02_f _ 2015_17							
		Action/	Commo	ntc			

#### Action/Comments

No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

LM Start	5.54	Rating **	М	Issue No.	17 (cont)
LM End	5.54	Issue Type +	Ma	Location *	LS

#### Photo 1 of 2 : FA\_2015\_NA0008\_257\_17\_20151005\_00016.jpg



Perspective view of the slope damaged by rodent burrows on the landward side of the levee looking downstream. Fall 2015.

#### Photo 2 of 2: FA\_2015\_NA0008\_257\_17\_20151005\_00017.jpg



The rodent hole does not seem to go through the levee. Fall 2015.

LM Start	5.66	Rating **	U	Issue No.	16		
LM End	5.66	Issue Type +	Ma	Location *	LS		
Category Earthen Levee				GPS Latitude/Longitude			
Category				Start		End	
Item	Animal Co	ontrol		38.78979	٥ °	38.789794°	
item				-121.72033	8 °	-121.720338 °	
DWR ID DWR_NA0008_02_f _ 2015_16							
	Action/Comments						

No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

### Photo 1 of 2 : FA\_2015\_NA0008\_257\_16\_20151005\_00021.jpg



Perspective view of the animal hole on the landward side of the levee looking downstream. Fall 2015.

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiancy Ob : Design & System Obsolescence En : Enforcement

#### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2015

#### **Knights Landing Ridge Drainage District**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	09/29/2015 09/29/2015	Jai Lor

LM Start	5.66	Rating **	U	Issue No. 16 (cont)		16 (cont)	
LM End	5.66	Issue Type +	Ma	Location *	LS		
Category Earthen Levee			GPS Latitude/Longitude				
Calegory				Start		End	
Animal Control			38.789794°		38.789794	•	
item				-121.720338 °		-121.720338	۰
DWR ID DWR_NA0008_02_f _ 2015_16							
Action/Comments							

No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.



There seems to be more than 2 cubic feet of material on the landward side of the levee. Fall 2015.

LM Start	5.72	Rating **	М	Issue No.	19		
LM End	5.72	Issue Type +	Ma	Location *		LS	
Category Earthen Levee			GPS Latitude/Longitude				
Calegory				Start		End	
Animal Control			38.790385 °		38.790385 °		
item			-121.721131 °		-121.721131 °		
DWR ID DWR_NA0008_02_f _ 2015_19							
Action/Comments							

No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

No Photos